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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1791

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/733,314	Applicant(s) LIEDERER, WERNER	
	Examiner Steven D. Maki	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-39, 42-71 and 73-75 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-39, 42-71 and 73-75 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1) A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5-2-08 has been entered.

2) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3) Claims 1-12, 14-38, 42, 67-69 and 71 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 1, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the omission of the subject matter of the first angle being in the central area and the second angle being in the area of at least one of the tread edges. Claim 1 requires "comprising a first angle relative to a circumferential direction of less than approximately 45 degrees and a second angle relative to the circumferential direction of greater than approximately 45 degrees" without the subject matter of the first angle

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being in the central area and the second angle being in the area of at least one of the tread edges. The original disclosure fails to reasonably convey inclining the grooves in the central area at a second angle greater than approximately 45 degrees.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Europe 822

5) **Claims 1-10, 16-17, 19-24, 30, 35-39, 42-47, 53-54, 56-62, 65-68, 70 and 73-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 822 (EP 970822) in view of Europe 596 (EP 375596) and optionally Graas (US 5,957,179).**

Contrary to applicant's arguments, the profile structures in a base pitch of Europe 822 have different lengths. For example, in base pitch BLmin in figure 1, one profile structure has a length of a fraction of Lmax + a fraction of Lmin whereas the other profile structure has a length of a fraction of Lmin and a fraction of Lmin.

Europe 822 teaches a vehicle tire having a tread pattern as shown in figures 1 and 2. The tread pattern comprises blocks separated by circumferential grooves and lateral grooves. In the figure 2 embodiment, the lateral grooves are curved from the tread edge to the tire equator such that the lateral grooves are more curved near the tire equator than the tread edge. As can be seen from figure 2, the curved lateral grooves extend to but not beyond the center circumferential grooves so that the lateral grooves on both sides of the tread form a "V-shaped groove". In figures 1-2, the base pitches

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have the different lengths BLmax and BLmin and two shoulder blocks 3a are provided for each central block 2a. Each base pitch comprises two shoulder blocks separated by a cross groove. Europe 822 teaches that three shoulder blocks may be used for each central block 2a. See machine translation. When three shoulder blocks are used, each base pitch BLmax and BLmin comprises two cross grooves. It is noted that long block 2a is between the straight central circumferential groove and an outer straight circumferential groove. See figure 2. With respect to the base pitches, claim 1 reads on each of the one base pitch and the another base pitch each having two profile structures separated by a cross groove. Claim 1 fails to require a different number of profile structures and/or a different number of cross grooves in the base pitches. The claimed profile structures read on the shoulder blocks 3a, which can number two, within each base pitch. As to claim 43, Europe 822 teaches that three shoulder blocks (profile structures) may be used in each base pitch. Claim 43 reads on each of the one base pitch and the another base pitch each having three profile structures separated by two cross grooves. Claim 61 reads on each of the one base pitch and the another base pitch each having two profile structures separated by a cross groove. With respect to V-shaped groove, each base pitch in the figure 2 embodiment has part of one of the V-shaped grooves. Claims 1, 43 and 61 fail to define base pitches that distinguish over those illustrated by Europe 822. In any event: It would have been obvious to one of ordinary skill in the art to provide Europe 822's tire with two base pitches having different circumferential lengths (e.g. BLmin, BLmax) such that each base pitch comprises three different length shoulder blocks (profile structures) and two cross

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grooves since (1) Europe 822, directed to reducing noise and obtaining uniform wear, shows the tread has having two different length base pitches wherein each base pitch comprises one central block, two different length shoulder blocks and one cross groove and (2) Europe 822 suggests using three shoulder blocks for one central block as an alternative to using two shoulder blocks for one central block. As to claims 1, 74 and 75 ("blocks arranged on opposite sides of the straight circumferential groove being circumferentially offset"), Europe 822 teaches that one tread half can be shifted in the circumferential direction with respect to the other tread half. See page 3 lines 3-5 of machine translation. This teaching by Europe 822 is considered to teach blocks on opposite sides of the straight circumferential groove being circumferentially offset.

With respect to the first angle and second angle (claims 1 and 39), it would have been obvious to one of ordinary skill in the art to provide Europe 822's transverse grooves as continuously curved grooves such that, in the central area, the curved transverse grooves are inclined at an angle of less than 45 degrees with respect to the circumferential direction and, in an area of the tread edge, are inclined at an angle greater than 45 degrees with respect to the circumferential direction since (1) Europe 822 illustrates a directional tread pattern in which the transverse grooves, which extend from the tread edge to the straight center circumferential groove, are formed as curved grooves whose inclination with respect to the circumferential direction decreases toward the equatorial plane (figure 2) and (2) Europe 596, also directed to a directional tire tread pattern, suggests providing curved transverse grooves such that the centerline

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follows a logarithmic spiral to provide adequate traction for a vehicle operating under wet conditions.

With respect to claims 1, 74 and 75 ("circumferentially offset"), see page 3 lines 3-5 of the machine translation. In any event: It would have been obvious to one of ordinary skill in the art to provide the blocks of Europe 822's tread such that blocks arranged on opposite sides of the straight circumferential groove are circumferentially offset since Grass, also directed to a directional tread pattern having four rows of blocks defined by three circumferential grooves and curved lateral grooves, suggests skewing the tread halves around the straight center circumferential groove to improve noise properties (figure 2, col. 4 lines 28-37). This skewing (circumferential offset) is readily apparent in figure 2 of Graas. Thus, Graas (optionally applied) teaches a generally similar tread pattern to that of Europe 822 and motivates one of ordinary skill in the art to provide the blocks arranged on opposite sides of Europe 822's straight circumferential groove such they are circumferentially offset as claimed to obtain the disclosed benefit of improving noise. This benefit of improving noise is directly relevant to Europe 822 since Europe 822 teaches minimizing tire / roadway noise.

As to claim 2, Europe 822 teaches a radial ply vehicle tire.

As to claims 3, 8-10, 16-17, 19-24, 44-47, 53-54, 56-59, 62-64, 67-68, 70, 73, Europe 822 suggests using two or three shoulder blocks in each base pitch wherein each shoulder block has a length determined by different length sub-pitches such as L_{min} and L_{max} .

As to claim 4, the blocks form the tread surface.

As to claims 5-7, the base pitches and shoulder blocks are arranged each arranged in a "specific sequence" (e.g. BLmax, BLmax, BLmin).

As to claim 30, note the cross groove with pitch Lmin.

As to claims 35-36, the shoulder blocks are arranged in a circumferential row.

As to claims 37-41, Europe 822 teaches extending the curved lateral grooves from the tread edge to the central circumferential groove such that the grooves are more curved near the center circumferential groove and Europe 596, also directed to a directional tire tread pattern, suggests providing curved transverse grooves such that the centerline follows a logarithmic spiral to provide adequate traction for a vehicle operating under wet conditions.

As to claims 42 and 60, Europe 822's tire is inherently obtained by a "method of making a tire".

As to claim 65, note the pocket grooves in the central blocks.

As to claim 66, Europe 822 teaches using three circumferential grooves as indicated by figure 2.

6) Claims 25-29 and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 822 in view of Europe 596 and optionally Graas as applied above and further in view of Europe 436 (EP 268436).

As to claims 25 and 26, it would have been obvious to use four or five profile structures in Europe 822's tread since (1) Europe 822 teaches using two or three shoulder blocks in a base pitch and (2) Europe 436 teaches using more than two blocks such as five blocks in a base pitch of a tire tread to reduce noise.

As to claims 27-29, the claimed ratio of profile structure length would have been obvious in view of Europe 436's suggestion to use a length ratio of 1.5-1.9 for the blocks.

As to claims 63-64, it would have been obvious to one of ordinary skill in the art to use three base pitches instead of two base pitches for Europe 822's tread in view of Europe 436's suggestion to use three base pitches for a tire tread to reduce noise wherein each base pitch, like that of Europe 822, comprises plural blocks and transverse grooves.

Great Britain

7) Claims 1-12, 14-39, 42-71 and 73-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain (GB 2376217) in view of Europe 596 (EP 375596) and at least one of Europe 436 (EP 268436), Japan 610 (JP 01-314610) and German 061 (DE 10145061).

With respect to German 061, Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Great Britain discloses a pneumatic radial tire (e.g. size such as 225/45ZR17) comprising blocks defined by circumferential grooves, lateral grooves and cross grooves. Circumferential groove 2 is located at the tire equator (line CL). Curved lateral grooves 5 extend from the tread edge to but not beyond the straight center circumferential groove 2. See figure 1 and page 7. Great Britain discloses "The left and right lug grooves 5 are inclined grooves inclining from the narrow groove 2 towards the

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reverse direction to the rotating direction R of the tire. The inclined grooves are shaped in a circular arc which is convex towards the reverse direction to the rotating direction of the tire" (page 7, emphasis added). The curved lateral grooves 5 define "base pitch" wherein each base pitch comprises two shoulder blocks and one cross groove 7. Great Britain teaches that the curved grooves 5 are formed at variable pitches to convert pitch noise to white noise. See figure 1, page 6 lines 7-10, page 10 lines 23-25, page 11 lines 1-5. The claimed base pitches read on the base pitches formed by the curved lateral grooves 5. The claimed base pitch reads on Great Britain's base pitch comprising lug groove 5, blocks 6B1 and subgroove 7. Each base pitch therefore comprises two profile structures (blocks 6B1). The claimed method steps are inherent in the manufacture of Great Britain's tire. As to claim 1 ("blocks arranged on opposite sides of the straight circumferential groove being circumferentially offset"), the blocks 6a of rows X1 are circumferentially offset as claimed. See figure 1 of Great Britain.

As to claim 1, it would have been obvious to provide Great Britain's inclined lateral grooves as continuously curved grooves such that, in the central area, the curved transverse grooves are inclined at an angle of less than 45 degrees with respect to the circumferential direction and, in an area of the tread edge, are inclined at an angle greater than 45 degrees with respect to the circumferential direction since (1) Great Britain teaches shaping the inclined grooves 5 in a circular arc which is convex towards the reverse direction to the rotating direction of the tire (page 7) and (2) Europe 596, also directed to a directional tire tread pattern, suggests providing curved transverse

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grooves such that the centerline follows a logarithmic spiral to provide adequate traction for a vehicle operating under wet conditions.

Great Britain is also considered to disclose the claimed base pitches. In any event, it would have been obvious to one of ordinary skill in the art to arrange Great Britain's lateral grooves such that the resulting tread has different length base pitches comprising profile structures as claimed in view of Great Britain's teaching to arrange the lateral grooves 5, which define a repeating geometric pattern, at variable pitches to reduce noise and in view of the suggestion from at least one of Europe 436, Japan 610 and German 061 to use "base pitches" of different lengths to reduce noise of a tire tread with a "base pitch" of the tire tread being defined by a repeating geometric unit comprising at least two shoulder blocks and at least cross groove.

As to claim 1 ("blocks arranged on opposite sides of the straight circumferential groove being circumferentially offset"), the blocks 6a of rows X1 are circumferentially offset as claimed. See figure 1 of Great Britain.

As to claim 2, Great Britain teaches a radial pneumatic tire.

As to claims 3, 8-10, 16-17, 19-24, 44-47, 53-54, 56-59, 62-64, 67-68, 70, 73, it would have been obvious to provide Great Britain's tire tread with profile structures and cross grooves as claimed in view of Great Britain's teaching to use two shoulder blocks and a cross groove for each base pitch and in view of the suggestion from at least one of Europe 436 and Japan 610 to use "base pitches" of different lengths to reduce noise of a tire tread with a "base pitch" of the tire tread being defined by a repeating geometric unit comprising at least two shoulder blocks and at least cross groove wherein (a)

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Europe 436 teaches providing each base pitch having a length LG_j with blocks having different lengths Li , and (b) Japan 610's teaching to provide each base pitch with two shoulder blocks having different lengths.

As to claim 4, the blocks form the tread surface.

As to claims 5-7, the base pitches and shoulder blocks disclosed by Great Britain and each of the secondary references are arranged each arranged in a "specific sequence".

As to claims 11-12, 14-15, 18, 48-52, 55, and 69, it would have been obvious to use profile structures having the same length with base pitches as claimed in view of Great Britain's teaching to use shoulder blocks of the same length within the base pitch and optionally Europe 436's or German 061's teaching to use shoulder blocks of the same length in at least one base pitch.

As to claims 30 and 31, the cross grooves 7 have a width narrow than a width of the curved grooves 5.

As to claims 35-36, the shoulder blocks are arranged in a circumferential row.

As to claims 37-41, Great Britain teaches extending the curved lateral grooves from the tread edge to the central circumferential groove such that the grooves are more curved near the center circumferential groove and Europe 596, also directed to a directional tire tread pattern, suggests providing curved transverse grooves such that the centerline follows a logarithmic spiral to provide adequate traction for a vehicle operating under wet conditions.

As to claims 42 and 60, Great Britain's tire is inherently obtained by a "method of making a tire".

As to claim 65, note the pocket grooves in the intermediate blocks.

As to claim 66, Great Britain teaches using five circumferential grooves as indicated by figure 1.

As to claims 25 and 26, it would have been obvious to use four or five profile structures in Great Britain's base pitch since Europe 436 teaches using more than two blocks such as five blocks in a base pitch of a tire tread to reduce noise.

As to claims 27-29, the claimed ratio of profile structure length would have been obvious in view of Europe 436's suggestion to use a length ratio of 1.5-1.9 for the blocks.

As to claims 32-34, it would have been obvious to use the claimed base pitches in view of Europe 436 or German 061's teaching to use different number blocks in each base pitch.

As to claims 63-64, it would have been obvious to one of ordinary skill in the art to use three base pitches for Great Britain's tread in view of the suggestion from at least one of Europe 436, Japan 610 and German 061's suggestion to use three base pitches for a tire tread to reduce noise.

As to claim 71, Great Britain teaches arranging the curved grooves at variable pitches and thereby teaches a base pitch having two blocks, one cross groove 7 and only one curved groove 5.

As to claims 74 and 75 ("blocks arranged on opposite sides of the straight circumferential groove being circumferentially offset"), the blocks 6a of rows X1 are circumferentially offset as claimed. See figure 1 of Great Britain.

Remarks

8) Applicant's arguments with respect to claims 1-12, 14-39, 42-71 and 73-75 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues and examiner agrees that the blocks in the illustrated embodiment of figure 2 of Europe 822 are circumferentially aligned and not circumferentially offset. However, Europe 822 describes an embodiment not shown wherein the figure 2 tread pattern is modified by shifting one side of the tread relative to the other side of the tread (page 3 lines 3-5 of the machine translation) and the optional Graas provides ample motivation (improve noise properties) to circumferentially offset the blocks of Europe 822 as claimed.

Applicant argues that the tread in figure 2 of Europe 822 merely shows two apparently different pitch lengths with two profile structures of each pitch length having the same circumferential length. Applicant is incorrect and, consequently, applicant's arguments based on this incorrect observation are not persuasive. The profile structures (shoulder blocks) in each base pitch have different lengths. See figure 1. It is noted that the figure 2 embodiment is the same as the figure 1 embodiment except that the lateral grooves are curved.

Applicant's argument that Europe 436 does not disclose diagonal grooves / grooves with greater curvature is not persuasive since Europe 436's pitching concepts are independent of the angle of inclination of the lateral grooves.

Applicant argues that there is no basis for combining Europe 436 and/or Graas with Europe 822. This argument is not persuasive since Europe 822, Europe 436 and Graas teach tire tread patterns having rows of blocks and desire noise reduction; it being noted that Graas and Europe 436's pitching concepts are independent of the angle of inclination / curvature of the lateral grooves.

Applicant's argument that Great Britain does not disclose the claimed base pitches is not persuasive since (1) each "base pitch" in Great Britain comprises two shoulder blocks, one groove 5 and one groove 7 and (2) it is undisputed that Europe 436, Japan 610 and German 061 teach base pitches. Applicant has provided no explanation why the pattern comprising two shoulder blocks, one groove 5 and one groove 7 does not repeat so as to preclude such a pattern being a base pitch. These references are combinable with Great Britain 217 since Great Britain 217, Europe 436, Japan 610 and German 061 teach tire tread patterns having rows of blocks and desire noise reduction; it being noted that the pitching concepts in Europe 436, Japan 610 and German 061 are independent of the angle of inclination of the lateral grooves.

Applicant's argument that Europe 436, Japan 610 and German 061 do not disclose diagonal grooves / grooves with greater curvature is not persuasive since the pitching concepts in Europe 436, Japan 610 and German 061 are independent of the angle of inclination of the lateral grooves.

- 9) No claim is allowed.
- 10) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
July 21, 2008